SOLVAY MINERALS

1021-014
CT-1347

January 23, 2002

Dan Olson
WDEQ-Air Quality Division
122 W. 25th Street
Cheyenne, WY 82002

RE: AQD #82 Permit Waiver Request

Dear Dan:

The purpose of this letter is to request a permanent permit waiver to allow the operation of AQD #82 (Dryer #6) at a maximum instantaneous production feed rate of 190 tons per hour (tph). This source was permitted under CT-1347 issued February 6, 1998 and started operation on March 16, 2001. A feed rate of 161 tph was submitted in the permit application, which was calculated, based on engineering estimates. However, as has been previously found with other new equipment, the actual achievable rate is higher than originally estimated.

A permit waiver was issued on June 13, 2001 to allow temporary operation of Dryer #6 and associated equipment at an increased production rate while stack testing. The tests confirmed that Dryer #6 can operate at a rate higher than that estimated in the permit application, while maintaining compliance with existing permitted emission limits. Testing was conducted at an average production feed rate of 171 tph (90 percent of requested rate of 190 tph); results are tabulated below:

	Emission limit (or estimate*) (pph)	Test result (pph)	%
PM_{10}	3.45	0.80	23
NO_X	30	25.1	84
CO	300*	146	49

Test Report No. 1457B–2, which details these results, is being submitted under separate cover.

Solvay Minerals, Inc.
P.O. Box 1167, Green River, Wyoming 82935 307/875-6500 Fax: 307/872-6[illegible]

An increase in the instantaneous production rate of DR-6 will not affect the facility permitted production rate of 3.6 MM TPY of soda ash, which is stipulated in condition (F1) of Operating Permit #31-126, issued July 24, 2001.

Enclosed you will find a completed permit application. If you have any questions, feel free to contact me at (307) 872-6571.

Respectfully submitted,
SOLVAY MINERALS, INC.

Dolly A. Potter
Environmental Services Supervisor

cc: Tony Hoyt

Enclosure

Department of Environmental Quality

Division of Air Quality

Permit Application

Date of Application: **January 23, 2002**

1. Company Name: **Solvay Minerals Inc.**

2. Mailing Address: **P.O. Box 1167 (#1 Westvaco Road)**
Green River, Sweetwater County, Wyoming 82935
(307) 875-6500

3. Plant Location: **NE ¼ of Section 31, Township 18 North, Range 109 West**
Sweetwater County, Wyoming (307) 875-6500

4. Name of Owner or company official to contact regarding air pollution matters:
Ronald O. Hughes Resident Manager
P.O. Box 1167 Green River, Wyoming 82935
(307) 875-6500

5. General nature of business: **Trona mine and refinery, producing soda ash and other sodium-based products**

6. Permit application is made for:

_____ New construction ___X___ Modification **(of instantaneous production rate limit)**

_____ Relocation _____ Operation

7. Type of equipment to be constructed, modified, or relocated. (Please list each major piece of equipment separately.)

Modification of permitted production rate of Product Dryer, no physical modification will be made

8. If application is being made for operation of an existing source in a new location, list previous location and new location: **N/A**

Previous location: _____

New location:

9. If application is being made for a crushing unit, is there: **No open crushing**

Primary crushing	Control equipment
Secondary crushing	Control equipment
Tertiary crushing	Control equipment
Recrushing & Screening	Control equipment
Conveying	Control equipment

Drying Control equipment

Other Control equipment **ESP and Flame Grid Burner**

Proposed dates of operation (month/year) **Upon receipt of permit**

10. Materials used in unit or process (include solid fuels):

Type of Material	Process Weight Average (lb/hr)	Process Weight Maximum (lb/hr)	Quantity/Year (tons/year)
Soda Ash	190	190	Facility total not to exceed 3.6 MM

11. Air contaminants emitted:

Emission Point	Pollutant	lb/hr	Ton/yr	Basis of Data
AQD #82 Dryer #6	PM_{10}	3.45	15.11	Vendor Guarantee @ 0.01 gr/dscf
	NO_X	30	131.4	Vendor Guarantee @ 0.15 lb/MM btu
	CO	300	1,314	Estimate based on stack testing
	VOC	0.27	1.18	AP-42 Table 1.4-1
	SO_2	0.0	0.0	Estimate based on stack testing

12. Air contaminant control equipment:

Emission Point	Type	Pollutant Removed	Efficiency
AQD #82 Dryer #6	ESP	PM_{10}	99.9 %
	Flame Grid Burner	NO_X	71.8 %

13. Type of combustion unit: (check if applicable) : N/A

A. Coal _____

1. *Pulverized* _____:

General _____; Dry Bottom _____; Wet Bottom _____; With Flyash Reinjection_____; Without Flyash Reinjection _____; Other_____

2. *Spreader Stoker* _____:

With Flyash Reinjection_____; Without Flyash Reinjection _____; Cyclone_____ ;
Hand-Fired _____ ; Other _____

B. Fuel Oil_____

Horizontally Fired _____; Tangentially Fired _____;

C. Natural Gas ___X___

D. If other, please specify_____

Hourly fuel consumption (estimate for new equipment) **193,237 scf/hr**

Size of combustion unit **200 MM** BTU heat input/hour

14. Operating Schedule: **24** hours/day; **7** days/week; **52** weeks/year.

Peak production season (if any): **None**

15. Fuel analysis:

	A. Coal	B. Fuel Oil	C. Natural Gas
% sulfur			
% ash			
BTU Value			Approximately 1035 Btu/scf

16. Products of process or units:

Products	Quantity/Year
Soda Ash (anhydrous sodium carbonate)	Total of 3.6 MM tpy

17. Emissions to the atmosphere (each point of emission should be listed separately and numbered so that it can be located on the flow sheet):

Emission Point	Stack Height (ft)	Stack Diameter (ft)	Gas Discharged ACFM DSCFM	Exit Temp (°F)	Gas Velocity (ft/s)
AQD #82	180	8.0	130,000 40,200	298	43

18. Does the input material or product from this process or unit contain finely divided materials which could become airborne?

__X__ Yes ____ No

Is this material stored in piles or in some other way as to make possible the creation of dust problems?

___ Yes __X__ No

List storage piles (if any): **N/A**

Type of Material	Particle Size (Diameter or Screen Size)	Pile Size (Average Tons on Pile)	Pile Wetted (Yes or No)	Pile Covered (Yes or No)

19. Using a flow diagram:
(1) Illustrate input of raw materials.

(2) Label production processes, process fuel combustion, process equipment, and air pollution control equipment.

(3) Illustrate locations of air contaminant release so that emission points under items 11, 12 and 17 can be identified. For refineries, show normal pressure relief and venting systems. Attach extra pages as needed. Attach extra pages as needed.

No changes to Permit CT-1347 diagrams.

20. A site map should be included indicating the layout of facility at the site. All buildings, pieces of equipment, roads, pits, rivers and other such items should be shown on the layout.

No changes to Permit CT-1347 site map.

21. A location drawing should be included indicating location of the facility with respect to prominent highways, cities, towns, or other facilities (include UTM coordinates).

No changes to Permit CT-1347 location drawing.

Certification

"I certify to the accuracy of the plans, specifications, and supplementary data submitted with this application. It is my opinion that any new equipment installed in accordance with these submitted plans and operated in accordance with the manufacturer's recommendations will meet emission limitations specified in the Wyoming Air Quality Standards and Regulations."

Signature R. Hughes

Typed Name **Ronald O. Hughes**

Title **Resident Manager**

Company **Solvay Minerals, Inc.**

Mailing Address **P.O. Box 1167, Green River, Wyoming 82935**

Telephone **(307) 875-6500**

P.E. Registration (if applicable) **N/A**

State where registered